

# Highlights of the National Household Fire Survey

RR NO.

18494





## U.S. DEPARTMENT OF COMMERCE

### National Fire Prevention and Control Administration

#### Purpose of NFPCA

... to reduce the nation's fire losses through programs of prevention and control.

... four program areas are:

- (1) Public Education
- (2) National Academy for Fire Prevention and Control
- (3) National Fire Data Center
- (4) Fire Research and Development

#### The National Fire Data Center

is responsible for the collection, analysis, publication, and dissemination of information related to fire prevention, occurrence, control and results.

#### The National Household Fire Survey

... was conducted to obtain an overview of the national household fire problem.

... was co-sponsored by the National Bureau of Standards of the Department of Commerce and the Consumer Product Safety Commission.

... was carried out by the Bureau of the Census of the Department of Commerce.

... an incident was reported as a fire if it emitted smoke or flames and was not started intentionally.

... 33,000 statistically selected households were interviewed.

... 2,463 fire incidents were reported.

The survey is a positive first step toward obtaining a valid estimate of the extent and causes of fires in the United States, including minor fire incidents not generally reported to the fire service. However, three major limitations must be recognized:

... the long recall period of one year required of the respondents.

... the large statistical error associated with such relatively infrequent events as fires.

... fires in business establishments, public places, government buildings, and common areas in apartments, were excluded from the survey.

SMN # 7346

RR # 18444

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## How Many Fires Occur?

- The 33,000 households surveyed reported 2,463 fires in the past year.
- This extrapolates into an estimated 5.6 million fires nationwide per year.



## Where Do Fires Occur?

		Reported Number of Fires	National Projection
Household	Single, Detached Structure	1,526	3,419,000
	Apartments	401	931,000
	Attached Structures	81	183,000
	Vacation Homes	6	14,000
	Total	2,014	4,547,000
Non-household	Automobiles	224	518,000
	Boats, Camping	8	18,000
	Garages, Sheds	58	126,000
	Total	290	662,000
Other		159	365,000
Grand Total		2,463	5,575,000

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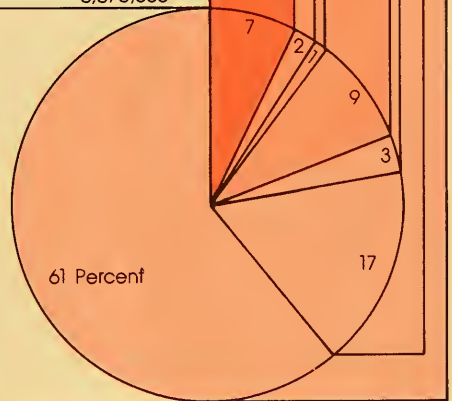
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Four-fifths of the fires reported in the Survey were household fires. Most of the rest were automobile fires.

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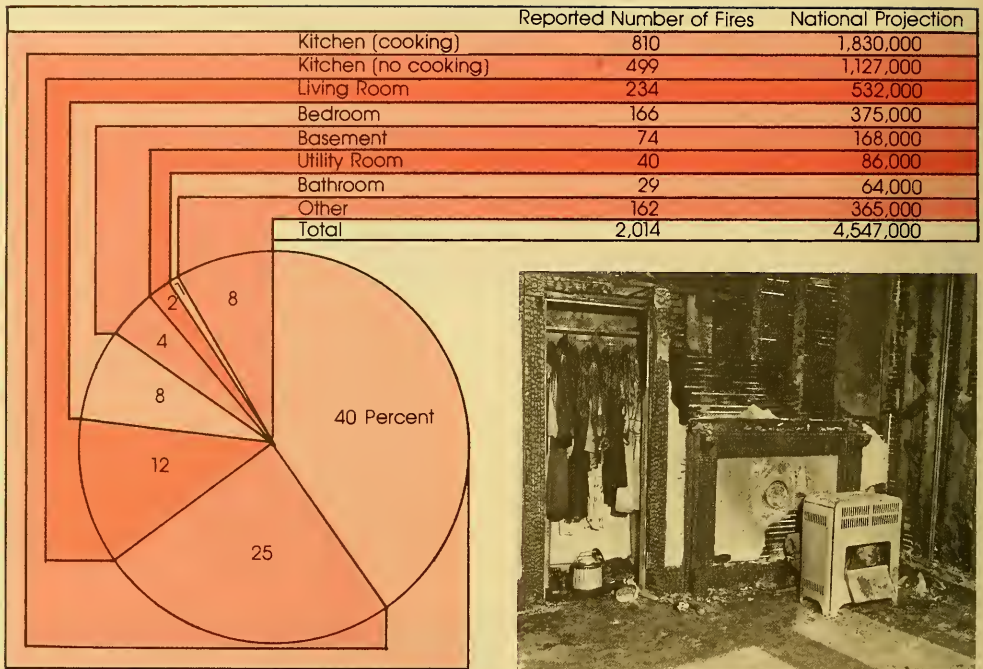


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## Where Do Fires Start?



Kitchen fires involving cooking constitute 40% of all household fires. Non-cooking kitchen fires account for another 25% of the total.



Estimated Number of Fires (1000's)

1,000

900

800

700

600

500

400

300

200

100

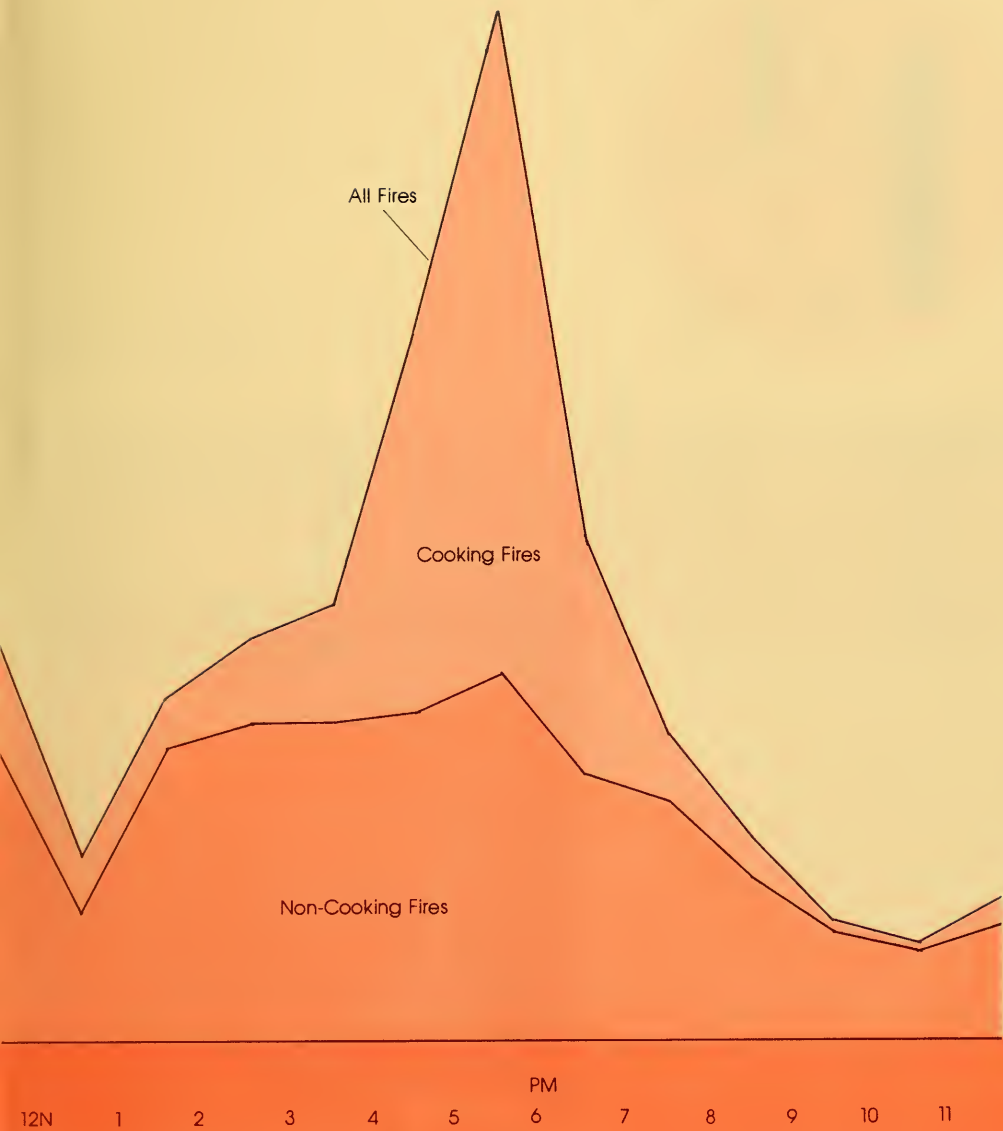
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### When Do Fires Start?

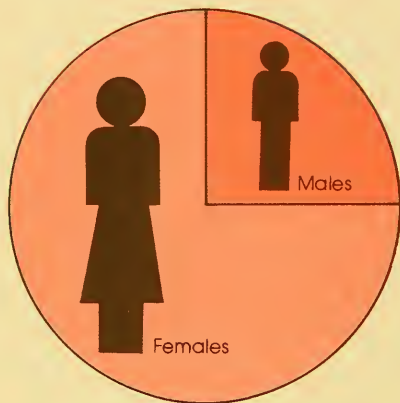
Fire starts show a sharp peak at the 5-6 p.m. period. This peak results from "cooking fires." Non-cooking fires do not peak as sharply.







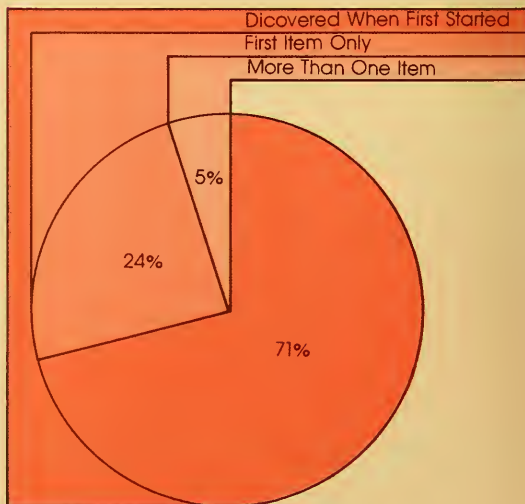
## Who Discovers Fires?



Three-quarters of all household fires were discovered by females.

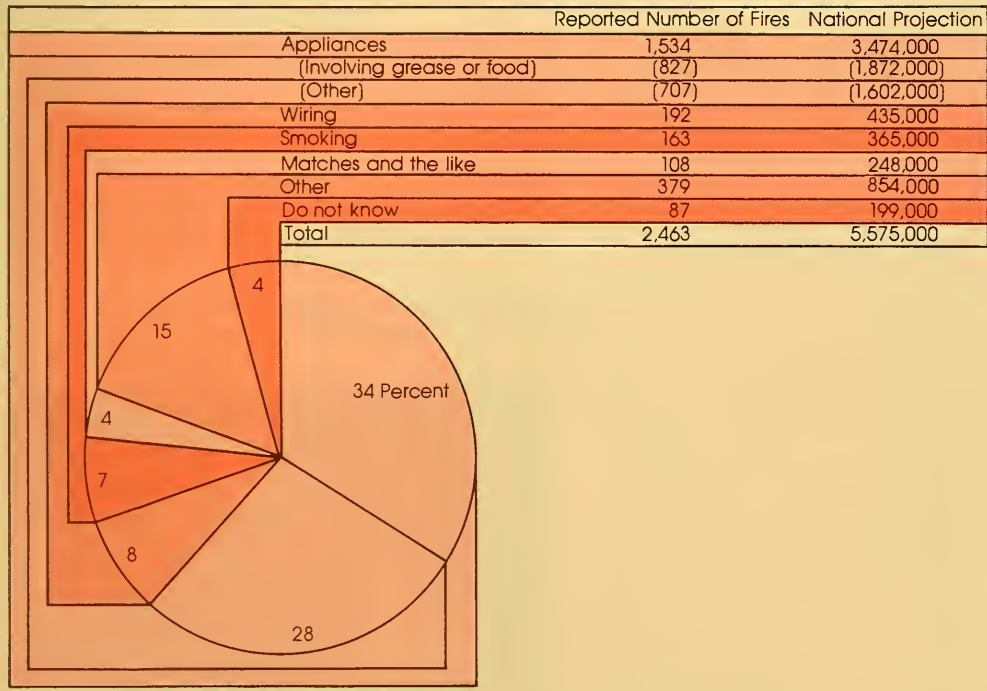
## When Are Fires Discovered?

Almost three-quarters of all household fires were discovered when they first started, and most of the rest were discovered before they spread to other items. Five percent were discovered after they had spread to other items.



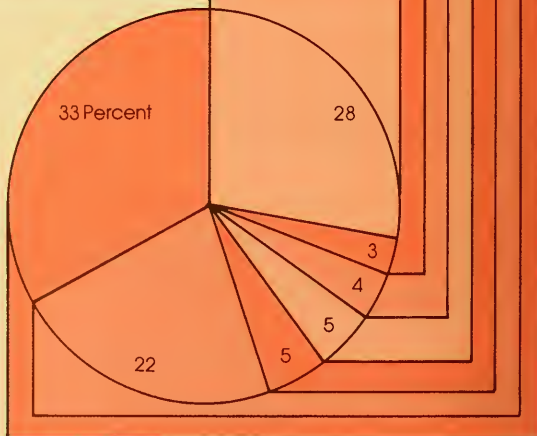
# What Starts Fires?

Over 60% of all fires involved appliances;  
more than half of these involved the ignition  
of grease or other foods.



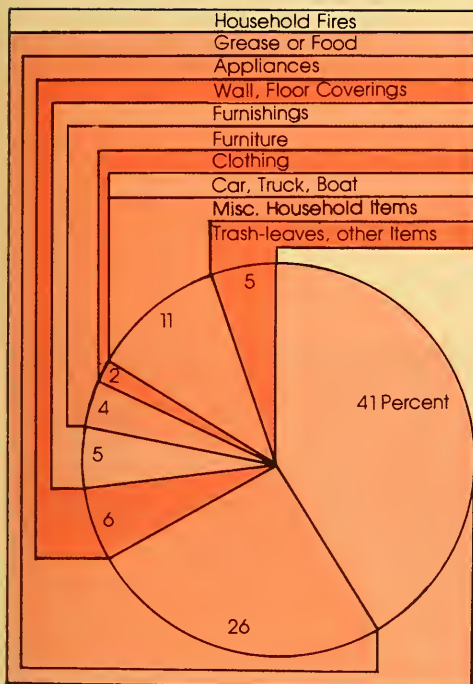
## What Catches Fire (begins to smoke) First?

Reported Number of Fires: National Projection		
Grease, Food	830	1,874,000
Appliances	551	1,242,000
Wall, Floor Coverings	124	286,000
Furnishings	113	258,000
Furniture	87	198,000
Clothing	67	159,000
Other	691	1,558,000
Total	2,463	5,575,000

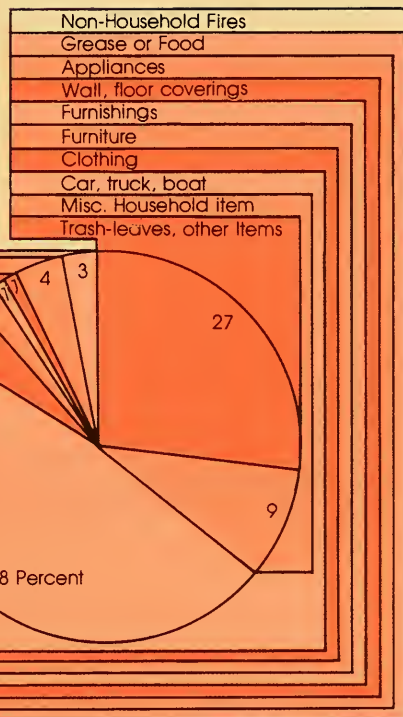


Grease and food were the first items to ignite in nearly one-third of all reported fires.





Grease and food make up 40% of first items to ignite in household, but only 3% in non-household fires.



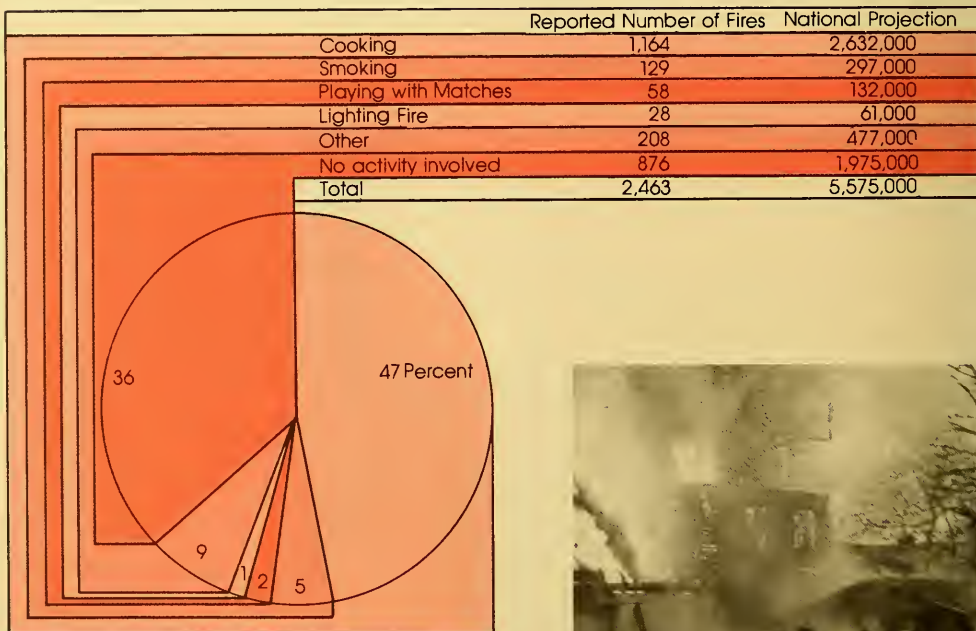


## What Are The Activities Connected With Fire?

Cooking was involved in nearly one-half of all the reported fires. However, cooking was involved in nearly three-quarters of all fires in which any human activity was involved.

## What Is The Involvement Of Flammable Liquids?

Flammable liquids did not constitute a major source of residence-related fires, but they were involved in more than a quarter of the non-residence-related fires.



## Who Gets Hurt?

The young and middle adult age groups show a relatively high rate of injury. Cooking and fire extinguishing activities contribute significantly to this rate.

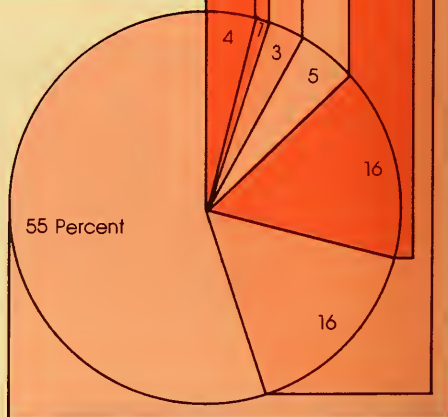
Age Group (Years)	Reported Number of Persons Injured*	Percent of U.S. Population, 1974	Number of Injuries Per 10,000 Population by Age Group
0-5	11	10	12.0
6-10	7	9	8.7
11-15	5	10	5.3
16-20	18	10	21.6
21-45	76	32	26.5
46-65	13	20	7.3
66 plus	9	9	12.1
Total	139	100	

\* For the injury portion of the Survey, injury data was solicited with regard to any fire, household or otherwise, in which a household member was injured.



## What Is The Dollar Loss?

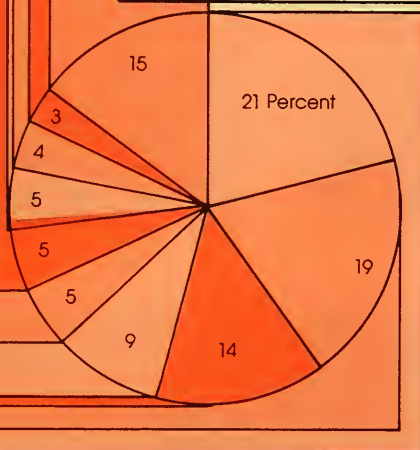
Property	Reported Number of Fires with Dollar Loss	National Projection	Average Dollar Loss	National Projection for Total Dollar Loss (Million)
Single Detached Structure	629	1,425,000	600	846
Automobile	161	366,000	700	248
Garage, Shed, etc.	37	85,000	3,000	243
Apartment	140	317,000	260	82
Vacation Home	2	5,000	9,000	42
Attached Structure	35	79,000	200	18
Boat	1	2,000	1,200	3
Camping Equipment	3	5,000	600	3
Other	61	137,000	400	60
<b>Total</b>	<b>1,070</b>	<b>2,421,000</b>		<b>1,545</b>



Of the 2,463 fires reported in the survey, 1070 reported losses adding up to \$683,000. For the remaining 1,393 fires no losses were reported. On a national basis these figures project to 2.4 million fires with a \$1.5 billion loss, and 3.2 million fires reporting no loss.

Of the properties in which fires occurred, those that contribute most to the total loss are the single, detached structure and the automobile.

First Item Ignited	National Projection for Total Dollar Loss (million)	Avg Dollar Loss per Fire	Avg. Dollar Loss per Fire which Resulted in Loss
Misc. Household	326	550	1,300
Walls, Floor, Coverings	283	1,000	1,800
Automobile, Boat, etc.	221	440	640
Appliance	142	110	190
Clothing	77	480	650
Furnishings	84	330	500
Mis., Non-Household	73	180	570
Furniture	60	140	440
Grease or Food	46	25	150
Don't Know	233	4,000	5,500
Total Household Items	1,018	220	540
Total, all Items	1,545	280	640



Fires in which walls and floors are reported to be the first items ignited account for some 20% of the losses resulting from the reported fires. It is very important to note that grease and food fires, while they constitute 33% of all fires, lead to only 3% of the total loss reported.

## Who Puts Out The Fire?

About 90% of the residence-related fires were put out by a member of the household, most often by a female.

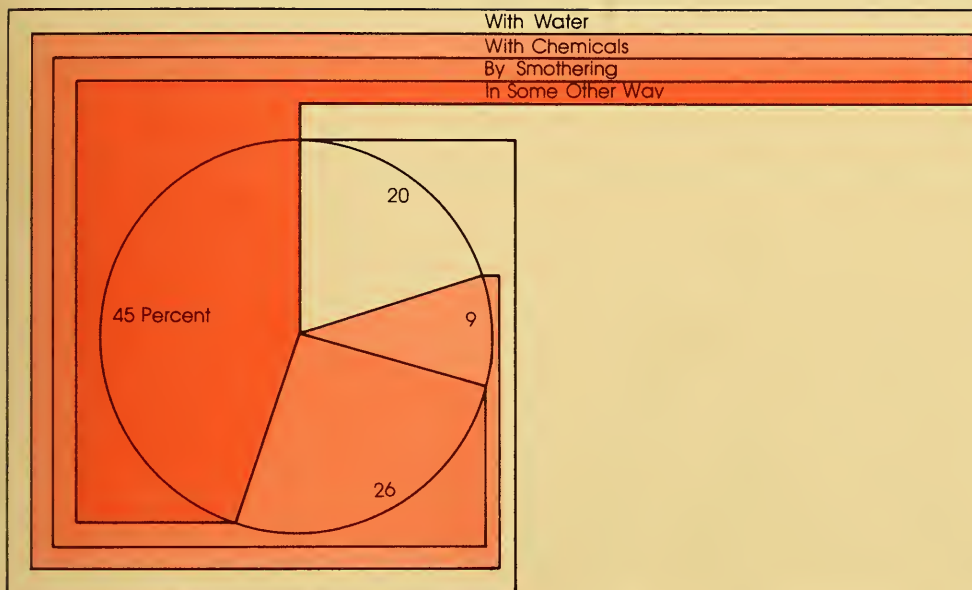
The fire department was called to less than 10% of the residence-related fires but to almost 30% of the reported fires occurring outside the residence.

The fire department actually extinguished about 6 percent of the residence-related fires and about 20 percent of the others.





## How Is The Fire Put Out?



**U.S. DEPARTMENT OF COMMERCE**  
**National Fire Prevention and Control Administration**  
Washington, D.C. 20230

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